Q2(a)

u_i : unit cost from central depot to warehouse

X_{ij} : number of units from warehouse i to retailer j

c_{ij} : unit cost from warehouse i to retailer j

D_j : demand of retailer j

$$\min \sum_{i=1}^{10} u_i * \sum_{i=1}^{10}\sum_{j=1}^{15} X_{ij} + \sum_{i=1}^{10}\sum_{j=1}^{15} c_{ij}X_{ij}$$

$$st. \sum_{i=1}^{10} X_{ij} = D_j, \quad \forall j = 1,2,3,\dots,15$$

$$\sum_{i=1}^{10}\sum_{j=1}^{15} X_{ij} = 615$$

$$X_{ij} \leq 10, X_{ij} \geq 0$$